The Level of Knowledge of Agricultural Extension Workers About the Importance of Using Social Media in Agricultural Extension Work in Agriculture in Baghdad Governorate

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Abstract

The research targeted the level of knowledge of agricultural extension workers about the importance of using social media in agricultural extension work in the agriculture of Baghdad Governorate, and identifying the obstacles to using social media in agricultural extension work from their point of view. This research was conducted on 97 individuals working in the extension agency in Baghdad Governorate, representing 50% of the 214 employees. A preliminary test was conducted on a sample of 20 workers in the Department of Agriculture from within the research community and outside the sample. The reliability of the questionnaire was measured using Faconbach's law, which was found to have a value of 0.95. Data was collected during December 2024 using a questionnaire prepared for this purpose. The descriptive approach was also relied upon in presenting the research results, and the most important results were as follows:

Nearly half of the respondents (50.52%) were in the intermediate level category according to their agreement on the importance of using social media in extension work. The most important obstacle to using social media in agricultural extension work is the lack of a special department for electronic Agricultural extension in the Ministry of Agriculture. The researcher recommends paying attention to the use of social media in extension work, which is the basis for its success and achieving its desired goals, and studying the obstacles, with the need for all organizations to come together to work to overcome them.

Keywords: knowledge; agricultural extension; use of social media; Baghdad Governorate.

1. Introduction And Research Problem:

The world is now witnessing many economic, social, and technological changes that have produced a new reality based on communication and communication through information and communications technology applications. These changes have led to changes in the way and style of people all over the world, and the world is now living in the era of knowledge or the so-called information and communications technology revolution. As information has

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become a force that can be used to increase the level of knowledge and a tool to influence the behavior of individuals in society (Al-Baali, 2018), This era is considered the era of the technological revolution and the era of accelerated change, and the era of global cultural and civilizational media openness. The technological revolution, which is one of the most important characteristics of the century in which we live, is a revolution that depends on advanced scientific knowledge and the optimal use of information flowing at rapid rates (Al-Issawi, 2004). and the greatest achievement achieved by the revolution. Technology in the field of communication and information means that distances are no longer an obstacle to the exchange of news and information, whether at the local, regional, or international level, as well as the integration between computer technology and communications satellite technology, especially the immediacy in transmitting news and information. No ruling authority at the level of the whole world can no longer block Facts about its citizens (Abu Zaid, 2007). The information and communication technology revolution has affected the culture of societies in form and content, facilitated communication between individuals and groups in various countries of the world and between various media, and eliminated spatial borders between countries and continents. It also created new ways of communicating and transferring knowledge through multiple communication media methods (Al-Awamra, 2013). Modern communications technology has also brought about a tremendous revolution and major changes in the structure and quality of communications. One of the most important manifestations of this modern technology was the Internet. In light of the rapid development of the uses of the Internet, so-called social networking sites appeared that changed the habits of users, and the users of these sites became the ones in control. In the content that is published and exchanged (Ahmed et al., 2017)

Since agricultural extension is one of the main systems that can be relied upon to modernize agriculture, achieve agricultural development, and keep pace with current changes through the main roles it performs, whether individually or collectively, which were mentioned by (Al-Hamdany and Al-Rikabi, 2021: 1) It is: educating farmers by helping them master new knowledge and developing their newly developed skills, in addition to helping them develop new resources for them in the field of agricultural production, providing them with useful technology, encouraging them to adopt new things, and developing relationships of trust within them. Agricultural extension is responsible for achieving agricultural and rural development by exploiting all available capabilities, providing information and knowledge in all activities of rural life, and changing the knowledge, skills, and attitudes of rural people, using various and multiple extension methods and means. However, traditional agricultural extension suffers from shortcomings in its methods and means of transferring agricultural knowledge, as we find that the traditional agricultural extension systems through which information and knowledge are communicated between agricultural research and agricultural extension are often weak, do not respond to the needs of the target audience, and also lack effective mechanisms for interaction. (HASKAH at all, 2024: 900). The agricultural extension system uses many traditional extension communication methods that face many obstacles that reduce the effectiveness of the agricultural extension service, such as farmers' dependence on each other more than their dependence on the agricultural extension system to obtain technical recommendations, and the weakness of agricultural extension devices as they do not work well and appropriately. Its impact is ineffective, in addition to the failure of this system to reach the vast majority of extension workers, and the weakness of the administrative apparatus for planning and implementing educational extension programs, as we find a shortage in the numbers of qualified agricultural extension workers, as well as a lack of financial budgets allocated to the agricultural extension sector There is also the lack of a strong connection between researchers, weak communication between researchers, agricultural extension workers, and extension workers at the village level, as well as weak cooperation and coordination between specialists and agricultural extension workers (Abdel Wahed, 2007). Therefore, it was necessary to take advantage of the rapid developments in the field of information and communications technology based on the application and employment of computers and the Internet to serve and develop the agricultural extension sector by providing wide and diverse communication channels, as well as activating the role of communications and information technology, which provides the most appropriate communication environment for achieving rural and agricultural development. Sustainable, and initiatives that employ communication and information technology in agricultural extension must be viewed as a complementary tool to traditional extension services and not a substitute for them (AL-Hamdany at all, 2021: 2). Electronic extension

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communication depends on the application and employment of modern information and communications technology in agricultural extension work to guide farmers to agricultural operations that lead to increasing agricultural production, providing communication between research, extension and farmers, and providing farmers' needs for modern information (Abdel Wahed, 2015). The agricultural extension system has recently turned to applying and employing information and communications technology to overcome the difficulties facing the agricultural extension system and traditional extension methods and to work to increase their effectiveness, as they are very powerful tools for educating rural people and providing them with the knowledge and skills they need to improve their living conditions, due to the diversity of applications of information and communications technology in Service to development, especially in the field of agricultural extension education, where information and communication technologies constitute a fundamental change in the educational process (Qeshta, 2012). Social media has become a prevalent cultural phenomenon that is very popular because it allows individuals to communicate in the Internet world, and enables the exchange of ideas and information without any geographical barrier, and thus it is currently replacing the traditional methods of transmitting information through publications or face-to-face communication with communication outlets on the Internet. Including social media, which represents a shift in how information is obtained, and supports the human need for social interaction through technology (Winstead et al., 2010). Agricultural extension can benefit from social media, as it includes a variety of applications based on the Internet and mobile phones, which can be chosen according to the audience and extension objectives, and it is also already used by the extension audience to learn about news, shop, and communicate with others. The use of social media in agricultural extension work provides the possibility of networking between farmers and relevant organizations in various parts of the world, which helps to disseminate and exchange information about agricultural innovations, reduce the social isolation of farmers, and enable them to communicate with each other and with extension workers, researchers, agricultural companies and government officials. Providing a wealth of knowledge and ideas from multiple sources, it is considered a successful marketing tool for various agricultural products, quickly conveying agricultural information, and communicating with a larger audience of guides, especially those who are difficult to reach through traditional methods. Social media is characterized by a snowball method, because a single piece of information can spread throughout the world and be exchanged by millions within minutes, providing greater opportunities for extension workers to develop their work performance and interaction with guides, ease of access, low costs, and versatility of uses. Social media has become popular. The use of mobile networks, which allows communication and dissemination of information almost anywhere, in addition to making educational extension materials available on the mobile phone, facilitates the work of the agricultural extension worker (Gharis et al., 2014). New information and communications technologies differ from old technologies in four dimensions: the ability to integrate multiple media outlets, overlapping interaction with the ability to monitor, maneuver, and participate, flexibility of use as they are freed from the boundaries of time and place, multiple communications links and access to every place and millions of web pages. Guidance is considered Agricultural e-learning is one of the forms of e-learning, and therefore e-extension can be defined as an extension system that relies on the new information and communications technology represented by computer technology and the Internet, making it available to all users without being tied to place and time, and with flexibility and ease (Qashta, 2012).

This research comes as a scientific attempt to determine the use of social media by employees of the Agricultural Extension Service in Baghdad Governorate by answering the following questions:

What is the degree of knowledge of the respondents about the importance of using social media in agricultural extension work?

What are the obstacles to using social media in agricultural extension work?

2. Objectives

The first goal: to identify the personal characteristics of the respondents (age, specialization, number of training courses in general, number of specialized courses in electronic counseling).

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The second goal: to identify the level of knowledge of the respondents about the importance of using social media in agricultural extension work.

The third objective: To identify the degree of obstacles to the use of social media in agricultural extension work from the point of view of the respondents who work in the agricultural extension system in the Baghdad Governorate.

3. Research method:

This research was conducted on a sample of 97 individuals, representing 50% of the total number of workers in the extension system in Baghdad Governorate, which number 214 individuals distributed among 14 agricultural divisions in the Baghdad Agriculture Directorate. A random sample of approximately 20 employees was selected to conduct the initial test from within the research community Out of sample. Data were collected during December 2024 using a questionnaire prepared for this purpose. The Faconbach equation was used to find the reliability of the scale, which was 0.95 degrees. The descriptive approach was relied upon in presenting the research results through a tabular display of frequencies and percentages. The statistical analysis was done using the statistical program SPSS.

4. Personal data of extension personnel.

Age: It was measured by asking the respondent to indicate the number of years he was old to the nearest Gregorian year at the time of data collection, and it was expressed as a raw number.

Specialization: It was measured by asking the respondent about his academic specialization, by choosing from two categories: agricultural extension and other specialization. The values 1 and 2 were given, respectively, for coding.

Number of training courses in the field of agricultural extension: It was measured by asking the respondent about the number of training courses they attended in the field of agricultural extension, and it was expressed as a raw number.

Number of training courses in the field of electronic counseling: It was measured by asking the respondent about the number of training courses they attended in the field of counseling, and it was expressed as a raw number.

5. Measuring the dependent variable:

Knowledge of the importance of using social media in agricultural extension work:

Knowledge of the importance of using social media was measured through 28 statements. Each respondent was asked to express their point of view on a scale consisting of three categories: (low, medium, and high). Values were given (0, 2, 1), and the range was. The actual range is between (0 and 56) degrees. Then the respondents' response categories were divided into three categories: low (1-19 degrees), medium (20-38 degrees), and high (39-56 degrees).

Obstacles to using social media in agricultural extension work:

Obstacles to using social media were measured through 15 statements. Each respondent was asked to express their point of view on a scale consisting of two categories: yes, and no. The values were given as 1 and zero, respectively. The actual range ranged between one degree as a minimum and 15 degrees as a maximum. The respondents' response categories were then divided into three categories: low (1 - 5 degrees), medium (6 - 10 degrees), and high (11 - 15 degrees).

6. Results

6.1 The first goal: to identify the personal characteristics of the respondents (age, specialization, number of training courses in general, number of specialized courses in electronic counseling).

The results related to the personal data of the respondents who work in the extension system showed that their average age was 59% in the elderly category (56 years and over), and that a little more than four-fifths of them had an

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academic specialty other than agricultural extension, and that nearly half of them (43%) were in At the intermediate level (1 - 2 courses) based on the number of training courses in the field of agricultural extension, and the vast majority of them (92%) did not receive any training courses in the field of electronic extension.

Table 1: Distribution of respondents whether the second se	io work in the	e extension system	according to	their studied	personal
variables.					

Variables	Categories	Number	0/0
Age	25-40	13	13.40
	41-55	25	25.77
	56-or more	59	60.83
Specialization	Agricultural extension	27	27.83
	Another specialty	70	72.17
Number of training	Low	41	42.27
courses in general	Middle	43	44.33
	High	13	13.40
Number of specialized courses in electronic	Nothing	92	94.85
counseling	(1-2)	5	5.15

6.2 The second goal: to identify the level of knowledge of the respondents about the importance of using social media in agricultural extension work.

The research results indicate that the degrees of the respondents' knowledge about the importance of using social media in extension work ranged from 1 to 56 degrees. The respondents were categorized based on their agreement regarding the importance of using social media in extension work into three groups, divided according to the law of range. It became clear that nearly half of the respondents (50.52%) fell into the middle-level category, about one-third (22.68%) fell into the high-level category, and approximately a quarter (22.68%) fell into the low-level category, as shown in Table No. 1.

The research results indicate that the degrees of the respondents' knowledge about the importance of using social media in extension work ranged from 1 to 56. The respondents were categorized based on their agreement regarding the importance of social media in extension work into three groups divided according to the law of range. Notably, nearly half of the respondents (50.52%) fell into the middle-level category, about a third (22.68%) fell into the high-level category, and approximately a quarter (22.68%) fell into the low-level category, as shown in Table No. (2).

Table 2. Distribution of respondents among extension workers according to their agreement on the importance of using social media in extension work in general.

s	the level	Number	%
1	Low (1-19 degrees)	22	22.68
2	Medium (20-38 degrees)	49	50.52
3	High (39-56 degrees)	26	26.80
the	total	97	100

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Table 2 shows that the level of knowledge of the respondents about the importance of using social media in extension work is average and tends to decrease and that the agreement of the respondents who work in the extension system on the items on the importance of using social media in extension work ranged between a maximum of 59.79% and a maximum of 38.4%. Lower, as overcoming the significant shortage in the numbers of agricultural extension workers, overcoming the weakness of the material and in-kind capabilities of the extension system, and the possibility of repeatedly disseminating extension messages to farmers came in the first place The most appropriate means of delivering guidance messages in light of the spread of the Corona virus, and the speed with which the guidance recommendations reach their beneficiaries, with a percentage of 57.7% for each of them, and reaching the largest number of advisors in different places, and following up on the markets and prices of agricultural products in agricultural exchanges, came in second place with a percentage 56.5% for each, and in third place came the speed of receiving feedback from recipients of messages to avoid shortcomings in them, and the most appropriate means of delivering indicative messages in cases of alert and early warning of disasters, Farmers are encouraged to form associations and unions to receive extension messages, at a rate of 43% for each of them, then in fourth place came everyone who encourages the spread of contract farming, which guarantees a remunerative return for farmers, and a reduction in the cost of extension work through social media, at a rate of 41.9%, and in fifth place. The ease of constantly updating agricultural information whenever new information becomes available, and the possibility of saving messages on the phone and referring to them when needed, came at a rate of 39.5%, and in sixth place came the diversity in displaying guidance messages via social media (audio messages - video - pictures), quickly transferring farmers' problems to research bodies to find solutions for them, and strengthening the relationship between the agricultural extension system and farmers, at a rate of 47.2% for each of them, and from seventh place to ninth place came everyone who was allowed to view agricultural extension sites. In the world and benefit from it, and expand the circle of providing extension services, so that it is not limited to the agricultural extension system only, and making available variable information such as marketing information and prices of agricultural production inputs, With percentages of 36%, 34.7%, and 22.3%, respectively, and in tenth place came the encouragement of creativity and innovation through the exchange of ideas between farmers receiving extension messages, and the possibility of identifying the number and type of visitors to extension sites and their needs so that the site can be developed, and it helps on disseminating agricultural extension messages in all areas of rural development, with a rate of 79.1% for each of them, and in eleventh place came all for saving the expenses of printing agricultural extension publications (bulletins - posters). Publishing videos representing virtual extension fields to guide farmers, at a rate of 44.2% for each, and in the last three ranks came the strengthening of the mutual relationship between researchers, the extension staff, and the farmers, eliminating the phenomenon of bias on the part of the agricultural extension worker with some extension workers, and achieving interaction between the elements of the communication and discussion process. Collectivism, at rates of 27%, 27.7%, and 18.4%, respectively, as shown in Table No. (3).

S	Importance paragraphs	Low		Low Medium		ium	High	
		Ν	%	Ν	%	Ν	%	
1	Overcoming the significant shortage in the number of agricultural extension workers	31	31.96	56	57.73	10	10.31	
2	Overcoming the weak financial and in-kind capabilities of the extension staff	27	27.82	55	56.71	15	15.46	
3	Possibility of repeatedly disseminating guidance messages to farmers	25	25.77	54	55.67	18	18.56	

 Table 3: Distribution of respondents among extension workers according to their agreement on the importance of using social media in extension work

The most appropriate way to deliver guidance 29 29.90 51 52.58 17 17.52 4 messages in light of the spread of epidemics and viruses Speedy delivery of guidance recommendations 26 26.80 52 53.61 20 20.62 5 to their beneficiaries Reaching the largest number of guides in 27 27.81 53 54.64 17 17.53 6 different places Monitoring markets and prices of agricultural 24 24.74 54 55.67 19 19.60 7 products in agricultural stock exchanges Speedy delivery of feedback from recipients of 25 25.77 56 57.73 16 16.49 8 messages to avoid shortcomings The most appropriate means of delivering 26 26.80 55 56.70 16 16.49 9 advisory messages in cases of alert and early warning of disasters Farmers are encouraged to form associations and 29 29.90 57 58.76 11.34 11 10 unions to receive extension messages It encourages the spread of contract farming, 19 19.60 58 59.79 20 20.62 11 which ensures a profitable return for farmers Low cost of extension work through social 50 51.55 25 25.77 22 22.68 12 media Ease of continuous updating of agricultural 24.74 23 23.71 50 51.55 24 13 information whenever new information becomes available The ability to save messages on the phone and 25 25.77 51 52.58 21 21.65 14 refer to them when needed Diversity in displaying guidance messages via 26 26.80 51 52.58 20 20.62 15 social media (audio messages, video, pictures) Rapid transfer of agricultural problems to 21 21.65 49 50.52 27 27.81 16 research bodies to find solutions Strengthening the relationship between the 20 20.62 48 49.48 29 29.90 17 agricultural extension system and farmers Allowing him to view agricultural extension 19 19.59 49 50.52 29 29.90 18 sites in the world and benefit from them Expand the scope of providing extension 21 21.65 49 50.52 27 27.81 19 services so that it is not limited to the agricultural extension system only Availability of variable information such as 21.59 49 20 50.52 28 28.27 20 marketing information and prices of agricultural production inputs Encouraging creativity and innovation through 19 19.59 48 49.48 30 30.93 21 the exchange of ideas between farmers receiving extension messages The ability to identify the number and type of 18 47 48.45 32.99 18.65 32 22 visitors to guide sites and their needs so that the site can be developed It helps disseminate agricultural guidance 21 47.42 30.93 21.65 46 30 23 messages in all areas of rural development

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24	Saving the expenses of printing agricultural extension publications (brochures, posters)	19	19.59	45	46.39	33	34.02
25	Videos representing virtual demonstration fields can be published to guide farmers	18	18.65	45	46.39	34	35.05
26	Strengthening the mutual relationship between researchers, extension staff, and farmers	17	17.53	44	45.36	36	37.11
27	Eliminating the phenomenon of bias on the part of agricultural extension workers, with some extension workers	16	16.49	40	41.24	41	42.27
28	Investigating the interaction between the elements of the communication process and group discussion	15	15.46	39	40.21	43	44.33

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6.3 The third objective: To identify the degree of obstacles to the use of social media in agricultural extension work from the point of view of the respondents who work in the agricultural extension system in the Baghdad Governorate.

The results indicate that there are several obstacles to using social media in agricultural extension work in the study area, the first of which was the lack of a special department for electronic agricultural extension in the Ministry of Agriculture, at a rate of 74.4%, and in second place was the difficulty of evaluating the educational impact of social media in extension work. Agricultural, at a rate of 67.4%, and in third place came the high material cost of establishing communications infrastructure, at a rate of 64%, and from fourth to sixth rank came the weakness of the communications infrastructure in many villages and remote areas, And the failure to update the information published on agricultural websites to keep pace with modern changes, and the low educational level of some farmers and the difficulty of using these methods, at rates of 59.3%, 55.8%, and 53.5%, respectively, and the preference for accessing pages was ranked seventh to tenth. Others on social media for entertainment and amusement, and the varying abilities of farmers in understanding and comprehending what is published on social media, and the lack of comprehensiveness of the service provided through social media to include all groups concerned with agricultural extension, and the ease of penetrating these sites and spreading false information on them at rates of 52.3%, and 51 2%, 48.8%, and 39.5%, respectively, The low efficiency of extension workers in using information and communication technology, the difficulty of convincing elderly traditional farmers to use these methods, and the weak confidence of farmers in the agricultural information published on these sites came in eleventh place, at a rate of 38.4% for each of them, and in the last two places were all Due to the lack of financial support necessary to operate this system, and the lack of agricultural electronic websites specific to each region or region, by 36% and 29.1%, respectively, as shown in Table No. (4).

Table 4. D	istribution of responde	ents who work in th	e extension system	according to their	agreement o	n the
obstacles to	o using social media in	agricultural extensi	on work.			

S	The problems			No	No	
		n	%	n	%	
1	There is no special department for electronic agricultural extension in the Ministry of Agriculture		69.07	30	30.93	
2	The difficulty of evaluating the educational impact of social media in agricultural extension work		61.86	37	38.14	
3	The high financial cost of establishing communication infrastructure	57	58.76	40	41.24	

4	Poor communication infrastructure in many villages and remote areas	57	58.76	40	41.24
5	Failure to update the information published on agricultural websites to keep pace with modern changes	53	54.64	44	45.36
6	The low educational level of some farmers and the difficulty in using these methods	47	48.45	50	51.55
7	Preferring to access other pages on social media for entertainment and entertainment	50	51.55	47	51.55
8	Farmers' varying abilities to understand and comprehend what is published on social media	47	48.55	50	51.55
9	The service provided through social media is not comprehensive enough to include all groups concerned with agricultural extension	48	49.48	49	50.52
10	It is easy to hack these sites and spread false information on them	37	38.14	60	61.86
11	Low efficiency of counselors in using information and communication technology	37	38.14	60	61.86
12	It is difficult to convince elderly traditional farmers to use these methods	37	38.14	60	61.86
13	Weak farmers' confidence in the agricultural information published on these sites	39	40.21	58	59.79
14	Lack of financial support is necessary to operate this system	37	38.14	60	61.86
15	The lack of agricultural websites for each agricultural division or region	27	27.84	70	72.16

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7. Conclusions

1- The research results indicate that approximately half of the respondents (50.52%) fall into the middle-level category, and it is concluded that the level of respondents' knowledge of the importance of using social media in extension work needs a lot of attention.

2- The research results indicate that there are problems in the use of social media in agricultural extension work, and they ranged between 59.79% as a maximum and 38.4% as a minimum. There is a need to pay attention to these problems and find solutions to them.

3- The results of the research related to the personal data of the workers in the extension staff in Baghdad Governorate showed that the vast majority of them are approaching retirement age and the end of their work period, hence the necessity of appointing new young people.

8. Recommendations

Given what the research results showed, which are related to the awareness of agricultural extension workers of the importance of using social media in extension work, which is considered a basis for its success, and achieving the desired goals of its use. Therefore, this research recommends relying on various social media outlets to convey the guidance message to farmers in the Baghdad Governorate.

Given what the research results showed regarding the existence of a group of problems in the use of social media in extension work, this research, therefore, recommends studying these obstacles with the need for all organizations to come together to work to overcome them and overcome them, each according to its specializations.

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9. Conflict of Interest

The authors declare that they have no conflict of interest.

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